

AD

TECHNICAL REPORT

TR-76-18 FEL

**STORAGE REQUIREMENTS FOR INGREDIENTS USED IN
PREPARATION OF 25,000 SERVINGS OF PRODUCTS FROM
THE 42-DAY MENU. ITEMS PREPARED ONSITE WITH
SUMMARIES OF ALL ITEMS.**

by

G. C. Walker

and

J. M. Tuomy

Project Reference: O&MA 728012.19

Production Engineering

**Approved for public release;
distribution unlimited.**

November 1975

**UNITED STATES ARMY
NATICK DEVELOPMENT CENTER
NATICK, MASSACHUSETTS 01760**



**Food Engineering Laboratory
FEL-46**

Approved for public release; distribution unlimited.

Citation of trade names in this report does not constitute an official indorsement or approval of the use of such items.

Destroy this report when no longer needed. Do not return it to the originator.

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM												
1. REPORT NUMBER TR-76-18 FEL	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER												
4. TITLE (and Subtitle) STORAGE REQUIREMENTS FOR INGREDIENTS USED IN PREPARATION OF 25,000 SERVINGS OF PRODUCTS FROM THE 42-DAY MENU. ITEMS PREPARED ONSITE WITH SUMMARIES OF ALL ITEMS.		5. TYPE OF REPORT & PERIOD COVERED Final												
7. AUTHOR(s) G.C. Walker J.M. Tuomy		6. PERFORMING ORG. REPORT NUMBER FEL-46												
9. PERFORMING ORGANIZATION NAME AND ADDRESS US Army Natick Development Center Natick, Massachusetts 01760		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS O&MA - Production Engineering 728012.19												
11. CONTROLLING OFFICE NAME AND ADDRESS Animal Products Branch US Army Natick Development Center Natick, Massachusetts 01760		12. REPORT DATE October 1975												
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office)		13. NUMBER OF PAGES 61												
		15. SECURITY CLASS. (of this report) UNCLASSIFIED												
		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE												
16. DISTRIBUTION STATEMENT (of this Report) Approved for public release; distribution unlimited.														
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)														
18. SUPPLEMENTARY NOTES														
19. KEY WORDS (Continue on reverse side if necessary and identify by block number) <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">MENU</td> <td style="width: 33%;">CENTRAL FOOD</td> <td style="width: 33%;">WEIGHT REQUIREMENTS</td> </tr> <tr> <td>MENU PLANNING</td> <td>FOOD</td> <td>WEIGHT</td> </tr> <tr> <td>PLANNING</td> <td>STORAGE</td> <td>REQUIREMENTS</td> </tr> <tr> <td>FOOD PREPARATION</td> <td>FROZEN FOODS</td> <td>MILITARY FACILITIES</td> </tr> </table>			MENU	CENTRAL FOOD	WEIGHT REQUIREMENTS	MENU PLANNING	FOOD	WEIGHT	PLANNING	STORAGE	REQUIREMENTS	FOOD PREPARATION	FROZEN FOODS	MILITARY FACILITIES
MENU	CENTRAL FOOD	WEIGHT REQUIREMENTS												
MENU PLANNING	FOOD	WEIGHT												
PLANNING	STORAGE	REQUIREMENTS												
FOOD PREPARATION	FROZEN FOODS	MILITARY FACILITIES												
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) This report breaks down the components of a 42-Day menu cycle so that the logistics involved including ambient, chill, frozen and root storage capacity required may be estimated for menu items produced onsite. In addition, the total storage requirements, both central and onsite, have been included.														

FOREWORD

The concept of central food preparation in various configurations is in effect or being considered for various Armed Service situations. Foods which lend themselves to the operation are made and frozen or chilled against an inventory rather than against a menu. This permits considerable savings in personnel and material costs as well as the concentration of scarce skilled personnel.

If full menus are to be served, the number of items to be prepared prohibits large scale continuous operations, and preparation facilities must be job shop in nature. However, equipment, layouts, space requirements, and waste volume can be estimated accurately by breaking down a typical menu cycle into food types and ingredients. A previous report by Walker et al. (1975) breaks down the products which are planned for central processing by the Army. This report covers items which would be prepared onsite and presents summary tables for all items contained in a 42-day menu cycle.

Determination of which items are to be prepared onsite and which centrally is a management judgment decision based upon cost, operation facility, and quality of the end product. Additionally, state of preparation of the raw materials is a management decision. In designing a central food preparation system for the Army it was decided to use raw materials now in the system. Determination of onsite or central preparation was made first on product quality and second on cost.

TABLE OF CONTENTS

	<u>Page No.</u>
Foreword	1
References	3
Introduction	4
Tables	6 - 65

REFERENCES

1. Bustead, Ronald L. Ed. 1972. CAFE Experiment at Fort Lewis, Washington. NLABS Technical Report 73-20-OR/SA.
2. Rowley, D.B., J.M. Tuomy and D.E. Westcott, Eds. 1972. Fort Lewis Experiment Application of Food Technology and Engineering to Central Food Preparation. NLABS Technical Report 72-46-FL.
3. Tuomy, Justin M. and Robert J. Byrne. 1974. Design of a Central Food Preparation Facility for the Army. NLABS Technical Report 72-25-OR/SA.
4. Walker, G.C., H.T. Schlup, and J.M. Tuomy. 1975. Requirements for 25,000 Servings of Items Selected from the 42-Day Menu. USANDC Technical Report 75-71-FEL.

INTRODUCTION

This Technical Report is a continuation of a Technical Report by Walker et al.(1975). That report details the requirements for storage of raw materials necessary to produce 25,000 standard servings of those selected items from the 42-day menu which would be processed in a Central Food Preparation Facility (Tuomy & Byrne, 1974). This report contains the requirements for producing 25,000 standard servings of the balance of the menu items which would be handled onsite and summarizes all of the items in the 42-day cycle. The menu used is referred to in a technical report by Rowley et al.(1972) and was used in a test of Central Preparation at Fort Lewis, Washington (Bustead, 1972).

The figures used in this report were computed from information found in the following sources: The Index of Recipes of the Armed Forces Recipe Service; The Federal Supply Catalog for FSC Group 89 - Subsistence; and The Master Menu and Master Menu Recapitulation.

Tables 1 through 7 show the net ingredient weight, net issue weight, gross issue weight and total cube requirements for each ingredient of the items prepared onsite when 25,000 standard servings are produced.

Table 8 shows the issue weight, total gross weight and total cube requirements for ambient storage of ingredients for 25,000 standard servings of items in the menu prepared onsite. Table 9 shows the same information for root vegetables; Table 10, for chilled storage; Table 11, for dairy products and eggs; and Table 12, for frozen storage.

Table 13 is an alphabetical list of the entree items prepared onsite and shows whether they are served alone or in combination with another item. Table 14 gives the same information for vegetables; Table 15, salads and salad dressings; Table 16, beverages; Table 17, butter, cereal and eggs; Table 18, desserts and pastries; and Table 19, condiments.

Table 20 summarizes the issue weights, total gross weights and total cube requirements for ambient storage of ingredients used to prepare 25,000 servings of items from the 42-day menu prepared onsite. The figures have been adjusted for times an item is served and whether or not served in combination with another item. Table 21 presents the same information for root vegetables; Table 22, chilled storage; Table 23, dairy products and eggs; Table 24, frozen storage.

Table 25 combines information from the report by Walker et al (1975) with information from this report to give the total ambient storage requirements for ingredients used in preparing 25,000 standard servings of all items from the 42-day menu whether prepared centrally or on site. Table 26 does the same for root vegetables; Table 27, chilled storage; Table 28, dairy products and eggs; and Table 29, frozen storage.

Table 30 summarizes the amounts of meat required to be held in frozen storage for use in making various products selected from the 42-day menu.

The figures given in this report are estimates to be used for planning purposes. They cannot be taken as absolute because of the dynamic nature of the subsistence system.

Items such as bread and milk are included in the appropriate tables even though they are usually local delivery items and central storage is not required. Local delivery items should be determined for each individual situation and adjustments made to the figures herein.

In the tables which follow, to convert from:

Pounds (lbs.) to Kilograms (kg) multiply by 0.4536; Cubic Feed (ft³) to Cubic Meters (m³) multiply by 0.0283.

Table 1. Ingredient Weights, Net Issue Weights, Gross Issue Weights and Total Cube Requirements for Ingredients Used in Entrees Prepared on Site from the 42-Day Menu (25,000 Standard Servings)

Entree and Ingredients Used Therein	Ingredient Weight (LBS)	Net Issue Weight (LBS)	Gross Issue Weight (LBS)	Gross Volume (ft ³)
<u>Beef, Hamburger</u>				
Bread, Dry, Broken	500	500	626	56.0
Water	750	750		
Beef, Boneless, Ground	7,500	7,500	8,100	175.5
Onions, Dry, Chopped	500	600	612	19.8
Eggs, Whole, Frozen	250	250	274	5.8
Monosodium Glutamate	23	23	31	1.0
Pepper, Black	2.5	2.5	3	0.2
Salt	125	125	127	2.0
<u>Beef Roast</u>				
Beef, Boneless, Oven Roast	10,000	10,000	10,800	234.0
Salt	62.5	62.5	63	1.0
Pepper, Black	7.8	7.8	10	0.4
<u>Beef Steak, Grilled</u>				
Beef, Boneless, Grill Steaks	12,500	12,500	13,500	292.5
Shortening	Variable			
Salt	Variable			
Pepper, Black	Variable			
<u>Fish, Baked</u>				
Fish, Fillet or Steak	7,500	7,500	8,100	183.0
Juice, Lemon, Concentrated, Frozen	188	188	263	5.8
Butter	250	250	290	4.7
Salt	47	47	49	0.8
Paprika, Ground	15.6	15.6	21	0.8
Parsley, Fresh, Chopped	15.6	15.6	20	1.7

Table 1 Con't

Entree and Ingredients Used Therein	Ingredient Weight (Lbs)	Net Issue Weight (Lbs)	Gross Issue Weight (Lbs)	Gross Volume (ft ³)
<u>Fish, French Fried</u>				
Fish, Fillet	7,500	7,500	8,100	183.0
Milk, Nonfat, Dry	39	39	47	1.5
Water, Warm	94	94		
Eggs, Whole, Frozen	500	500	551	11.7
Salt	55	55	56	0.9
Pepper, Black	3.9	3.9	5	0.2
Shortening 1/				
<u>Fishwich</u>				
Fish Portions	6,250	6,250	6,875	38.8
Dressing, Salad	562	562	886	21.3
Pickle Relish, Sweet	250	250	403	10.1
Parsley, Fresh	2.5	2.5	3.5	0.2
Pimientos	54	54	62	1.4
Onions, Dry	31	38	40	1.2
Paprika, Ground	0.6	0.6	1	0.1
Pepper, Cayenne	0.1	0.1	0.2	0.1
Buns, Hamburger	3,125	3,125	Est. 3,917	Est. 329.0
<u>Frankfurters, Simmered</u>				
Frankfurters, Frozen	6,250	6,250	6,708	176.0
Water	2,500	2,500		
<u>Ham Steaks, Baked</u>				
Ham, Canned, Whole	7,500	7,500	8,108	187.2
Sugar, Brown	750	750	781	13.2
Mustard, Ground	12.5	12.5	17	0.6
Vinegar	375	375	600	15.8
Water	500	500		
<u>Ham, Fresh, Roast</u>				
Pork Ham, Boneless, Frozen	10,250	10,250	10,865	256.2
Salt	125	125	127	2.0
Pepper, Black	7.8	7.8	10	0.4

Table 1 Con't

Entree and Ingredients Used Therein	Ingredient Weight (Lbs)	Net Issue Weight (Lbs)	Gross Issue Weight (Lbs)	Gross Volume (cu ft)
<u>Pork Roast</u>				
Pork Loin, Boneless	9,750	9,750	10,335	345.8
Salt	125	125	127	2.0
Pepper, Black	15.6	15.6	21	1.0
<u>Pork Sausage, Baked</u>				
<u>Links</u>				
Pork Sausage, Links	5,000	5,000	5,395	138.6
<u>Scallops, Fried</u>				
Scallops, Frozen	7,500	7,500	9,000	216.0
Flour, Pastry	1,000	1,000	1,010	22.6
Salt	78	78	79	1.3
Pepper, Black	3.9	3.9	5	0.2
Paprika, Ground	7.8	7.8	10	0.4
Milk, Nonfat, Dry	27	27	30	1.2
Water, Warm	234	234		
Eggs, Whole, Frozen	312	312	343	7.3
Bread Crumbs, Dry	750	750	851	42.0
Shortening 1/				
<u>Seafood Platter</u>				
Oysters, Frozen, Shucked	1,250	1,250	1,458	37.4
Flour, Pastry	312	312	315	7.0
Salt	15	15	16	0.3
Pepper, Black	1.2	1.2	2	0.1
Milk, Nonfat, Dry	12	12	13	0.5
Water	54	54		
Eggs, Whole, Frozen	156	156	179	3.7
Cracker crumbs	430	430	485	24.1
Fish Fillets, Frozen	2,025	2,025	2,187	49.4
Milk, Nonfat, Dry	10	10	11	0.4
Water	21	21		
Eggs, Whole, Frozen	135	135	150	3.2
Salt	15	15	16	0.3
Pepper, Black	1	1	1.5	0.1
Shortening 1/				

Table 1 Con't

Entree and Ingredients Used Therein	Ingredient Weight (Lbs)	Net Issue Weight (Lbs)	Gross Issue Weight (Lbs)	Gross Volume (ft ³)
<u>Shrimp, French Fried</u>				
Shrimp Frozen, Raw, Peeled, Deveined	5,000	5,000	5,800	243.0
Flour, Pastry	1,000	1,000	1,010	22.6
Salt	47	47	48	0.8
Pepper, Black	3.9	3.9	5	0.2
Paprika, Ground	7.8	7.8	10	0.4
Eggs, Whole, Frozen	500	500	551	11.7
Water	500	500		
Breadcrumbs, Dry	750	750	851	42.0
Shortening 1/				
<u>Turkey, Roast</u>				
Turkey, Ready-to-Cook	16,250	16,250	17,663	529.9
Salt	125	125	127	2.0
Pepper, Black	16	16	21	1.0
Butter	250	250	290	4.7
<u>Veal Roast</u>				
Veal, Boneless, Roast	10,250	10,250	11,070	237.8
Salt	125	125	127	2.0
Pepper, Black	7.8	7.8	10	0.4
<u>Veal Steaks, Braised</u>				
Veal, Boneless, Slices, Frozen	8,750	8,750	9,450	203.0
Pepper, Black	7.8	7.8	10	0.4
Salt	78	78	79	1.3
Shortening	250	250	260	5.0

1/ 5,250 lbs. of shortening are allowed for all deep fat frying in 42-Day Menu

Table 2. Ingredient Weights, Net Issue Weights, Gross Issue Weights and Total Cube Requirements for Ingredients Used in Vegetable Items Prepared on Site From the 42-Day Menu (25,000 Standard Servings)

Vegetable Items and Ingredients Used Therein	Ingredient Weight (Lbs)	Net Issue Weight (Lbs)	Gross Issue Weight (Lbs)	Gross Volume (ft3)
<u>Asparagus, Buttered</u>				
Asparagus, cuts and tips, frozen	5,000	5,000	5,624	220.8
Water	3,000	3,000		
Butter	250	250	290	4.7
<u>Beans, Green, Buttered</u>				
Beans, Green, Frozen	5,000	5,000	5,624	220.8
Water	4,000	4,000		
Butter	250	250	290	4.7
<u>Beans, Lima, Buttered</u>				
Beans, Lima, Frozen	5,000	5,000	5,624	220.8
Water	4,000	4,000		
Butter	250	250	290	4.7
<u>Beans, Wax, Buttered</u>				
Beans, Wax, Frozen	5,000	5,000	5,624	220.8
Water	4,000	4,000		
Butter	250	250	290	4.7
<u>Broccoli, Buttered</u>				
Broccoli, Frozen	5,000	5,000	5,624	220.8
Water	4,000	4,000		
Butter	250	250	290	4.7
<u>Brussels Sprouts, Buttered</u>				
Brussels Sprouts, Frozen	5,000	5,000	5,624	220.8
Water	3,500	3,500		
Butter	250	250	290	4.7

Table 2 Con't

Vegetable Items and Ingredients Used Therein	Ingredient Weight (Lbs)	Net Issue Weight (Lbs)	Gross Issue Weight (Lbs)	Gross Volume (ft ³)
<u>Cauliflower, Buttered</u>				
Cauliflower, Frozen	5,000	5,000	5,624	220.8
Water	6,000	6,000		
Butter	250	250	290	4.7
<u>Corn, Cream Style</u>				
Corn, Cream Style, Canned	6,000	6,000	6,900	165.0
<u>Corn, Southern Style</u>				
Peppers, Sweet, Fresh	500	534	570	30.8
Butter	125	125	145	2.3
Milk, Nonfat, Dry	102	102	110	4.4
Water	438	438		
Corn, Canned, Cream Style	5,000	5,000	5,750	137.5
Eggs, Whole, Frozen	375	375	410	8.7
Sugar, Granulated	62	62	63	1.0
Salt	31	31	32	0.1
Pepper, Black	3.9	3.9	5	0.2
<u>Corn, Whole Grain, Buttered</u>				
Corn, Whole, Grain, Frozen	5,000	5,000	5,624	220.8
Water	4,000	4,000		
Butter	250	250	290	4.7
<u>Greens, Southern Style</u>				
Greens, Frozen, Mustard or Turnip	5,000	5,000	5,624	220.8
Salt	31	31	32	0.1
Water	4,000	4,000		
Bacon, Chopped	500	500	583	18.9
Pepper, Black	1.9	1.9	3	0.1

Table 2 Con't

Vegetable Items and Ingredients Used Therein	Ingredient Weight (Lbs)	Net Issue Weight (Lbs)	Gross Issue Weight (Lbs)	Gross Volume (ft ³)
<u>Mushrooms, Sautéed</u>				
Mushrooms, Canned	1,000	1,000	1,205	25.8
Butter	125	125	145	2.3
Worcestershire Sauce	31	31	69	1.5
Pepper, Black	0.5	0.5	1	0.1
<u>Onion Rings, French Fried</u>				
Onions, Dry	5,000	6,000	6,120	198.0
Milk, Nonfat, Dry	203	203	246	11.9
Water	1,875	1,875		
Flour, Pastry	750	750	758	17.0
Salt	94	94	96	1.6
Pepper, Black	2.6	2.6	3	0.1
<u>Peas with Carrots, Buttered</u>				
Peas, Frozen	3,000	3,000	3,375	132.5
Salt	12	12	13	0.2
Water	1,800	1,800		
Carrots, Fresh, Sliced	1,750	1,788	1,825	64.8
Water	1,000	1,000		
Salt	31	31	32	0.5
Butter	250	250	290	4.7
<u>Peas with Mushrooms, Buttered</u>				
Peas, Frozen	5,000	5,000	5,500	177.9
Salt	21	21	22	0.4
Water	3,000	3,000		
Mushrooms, Canned, Sliced	1,000	1,000	1,205	25.8
Butter	250	250	290	4.7
<u>Peas, Black-Eyed</u>				
Peas, Black-eyed, Dry	2,000	2,000	2,083	46.6
Water	10,000	10,000		
Bacon, Chopped	500	500	583	18.9
Salt	39	39	40	0.6
Pepper, Black	3.9	3.9	5	0.2
Water (Variable)				

Table 2 Con't

Vegetable Items and Ingredients Used Therein	Ingredient Weight (Lbs)	Net Issue Weight (Lbs)	Gross Issue Weight (Lbs)	Gross Volume (ft ³)
<u>Peas, Buttered</u>				
Peas, Frozen	5,000	5,000	5,624	220.8
Water	3,000	3,000		
Butter	250	250	290	4.5
<u>Potato Chips</u>				
Potato Chips	2,344	2,344	3,906	742.2
<u>Potatoes, French Fried</u>				
Potatoes, French Fried				
Frozen	8,750	8,750	10,209	341.3
Salt	31	31	32	0.5
Shortening		See Footnote 1/ Table 1		
<u>Potatoes, Mashed</u>				
Milk, Nonfat, Dry	188	188	224	10.5
Water	1,500	1,500		
Butter	250	250	290	4.7
Salt	47	47	48	1.0
Water	4,250	4,250		
Potatoes, White, Instant	1,531	1,531	1,806	46.2
Pepper, Black	7.8	7.8	10	0.4
<u>Rice, Steamed</u>				
Rice, Parboiled	2,500	2,500	2,550	88.5
Water	6,000	6,000		
Salt	63	63	64	1.0
Salad Oil	63	63	71	1.3
<u>Spinach, Buttered</u>				
Spinach, Frozen	5,000	5,000	5,624	220.8
Water	1,000	1,000		
Salt	8	8	9	0.1
Butter	250	250	290	4.7
<u>Vegetables, Mixed, Buttered</u>				
Vegetables, Mixed, Frozen	5,000	5,000	6,000	183.3
Water	4,000	4,000		
Salt	31	31	32	0.1
Butter	250	250	290	4.7

Table 3. Ingredient Weights, Net Issue Weights, Gross Issue Weights and Total Cube Requirements for Ingredients Used in Salads and Salad Dressings Prepared on Site From the 42-Day Menu (25,000 Standard Servings)

Salads and Salad Dressings and Ingredients Used Therein	Ingredient Weight (Lbs.)	Net Issue Weight (Lbs.)	Gross Issue Weight (Lbs.)	Gross Volume (Ft. ³)
<u>Salad Fruit</u>				
Oranges, Fresh	1,750	2,223	2,403	70.5
Pineapple, Canned, Chunks or Tidbits	1,562	1,562	1,791	41.9
Bananas, Fresh	1,000	1,320	1,650	125.9
Apples, Fresh	1,500	1,620	1,782	95.0
Grapefruit, Canned	500	500	625	15.2
Dates	250	250	281	7.3
Marshmallows, Miniature	250	250	312	28.2
Creamy Fruit Dressing	6	6		
Lettuce, Fresh	1,000	1,260	1,470	102.5
<u>Dressing, Creamy Fruit</u>				
Cornstarch	78	78	85	2.0
Water	47	47		
Eggs, Whole, Frozen	375	375	410	8.7
Juice, Lemon, Frozen, Concentrated	250	250	408	8.9
Juice, Orange, Frozen, Concentrated	500	500	581	11.3
Juice, Pineapple, Canned	500	500	579	12.9
Salt	1	1	2	0.1
Sugar, Granulated	500	500	505	11.4

Table 4. Ingredient Weights, Net Issue Weights, Gross Issue Weights and Total Cube Requirements for Ingredients Used in Beverages Prepared on Site From the 42-Day Menu (25,000 Standard Servings)

Beverages and Ingredients Used Therein	Ingredient Weight (Lbs.)	Net Issue Weight (Lbs.)	Gross Issue Weight (Lbs.)	Gross Volume (Ft. ³)
<u>Coffee</u>				
Coffee, Roasted, Ground Water	750 15,000	750 15,000	881	28.4
<u>Juices</u>				
Grape, Frozen, Concentrated Water	1,000 3,000	1,000 3,000	1,161	22.5
Grapefruit, Frozen, Concentrated Water	500 1,500	500 1,500	581	11.3
Orange, Frozen, Concentrated Water	1,000 3,000	1,000 3,000	1,161	22.5
<u>Lemonade</u>				
Sugar, Granulated Water	1,750 3,000	1,750 3,000	1,768	39.7
Juice, Lemon, Frozen, Concentrated Water	500 9,000	500 9,000	581	11.3
Ice, Crushed	3,000	3,000	3,000	120.0
<u>Limeade</u>				
Sugar, Granulated Water	1,500 3,000	1,500 3,000	1,516	34.0
Juice, Lime, Frozen Single Strength Water	1,992 9,000	1,992 9,000	2,490	61.4
Ice, Crushed	3,000	3,000	3,000	120.0
<u>Milk</u>				
Milk, Homogenized, Fortified	53,750	53,750	55,817	878.6

Table 4 Con't

Beverages and Ingredients Used Therein	Ingredient Weight (Lbs.)	Net Issue Weight (Lbs.)	Gross Issue Weight (Lbs.)	Gross Volume (Ft. ³)
<u>Tea</u>				
Tea, Hot				
Tea, Black, Loose	125	125	141	7.2
Water	13,000	13,000		
Tea, Iced				
Tea, Black, Loose	156	156	176	9.0
Water	13,000	13,000		
Ice Crushed	6,250	6,250	6,250	250.0

Table 5. Ingredient Weights, Net Issue Weights, Gross Issue Weights and Total Cube Requirements for Ingredients Used in Butter, Cereals and Eggs Prepared on Site from the 42-Day Menu (25,000 Standard Servings)

Butter, Cereals and Eggs and Ingredients Used Therein	Ingredient Weight (Lbs.)	Net Issue Weight (Lbs.)	Gross Issue Weight (Lbs.)	Gross Volume (Ft. ³)
<u>Butter</u>				
Butter, Salted	3,750	3,750	5,000	226.9
<u>Cereals</u>				
Farina				
Cereal, Wheat, Farina	1,500	1,500	1,678	32.5
Salt	47	47	49	0.8
Water	10,000	10,000		
Hominy Grits				
Cereal, Hominy Grits	1,500	1,500	1,750	43.7
Salt	47	47	49	0.8
Water	9,000	9,000		
Oatmeal				
Cereal, Rolled Oats	1,500	1,500	1,750	90.0
Salt	47	47	49	0.8
Water	10,000	10,000		
<u>Eggs to Order</u>				
Eggs, Shell, Fresh	5,000	5,000	6,406	370.2
Shortening	Variable			
Salt	Variable			
Pepper, Black	Variable			
<u>Noodles, Buttered</u>				
Noodles, Egg	3,000	3,000	3,250	275.0
Salt	78	78	79	1.3
Water	12,000	12,000		
Butter	500	500	581	9.4
<u>Noodles, Chow Mein</u>				
Noodles, Chow Mein	562	562	938	68.8
<u>Pancakes</u>				
Mix, Pancake	3,750	3,750	4,500	145.0
Water				

Table 6. Ingredient Weights, Net Issue Weights, Gross Issue Weights and Total Cube Requirements for Ingredients Used in Desserts and Pastries Prepared on Site from the 42-Day Menu (25,000 Standard Servings)

Desserts and Pastries and Ingredients used Therein	Ingredient Weight (Lbs.)	Net Issue Weight (Lbs)	Gross Issue Weight (Lbs)	Gross Volume (ft ³)
<u>Bread, Assorted</u>				
White Bread	2,202	2,202	2,752	231.2
Wheat Bread	250	250	313	26.2
French Bread	2,000	2,000	2,500	210.0
Rye Bread	250	250	313	26.2
<u>Buns, Hamburger</u>				
Rolls, Bread, Fresh Sandwich (Hamburger)	Variable			
<u>Crackers</u>				
Cracker, Soda, Saltine	Variable			
<u>Fruit, Canned</u>				
Cherries	6,875	6,875	7,882	184.5
Peaches	6,875	6,875	7,882	184.5
Plums	6,875	6,875	7,882	184.5
Blackberries	6,875	6,875	7,929	193.8
Figs	6,875	6,875	8,461	193.0
Pears	6,875	6,875	7,906	189.1
<u>Fruit, Dried</u>				
Applesauce, Instant	344	344	511	12.1
Prunes	875	875	1,167	53.4
<u>Fruit, Fresh</u>				
Apples	4,500	4,500	4,950	114.0
Bananas	4,500	4,500	5,625	428.6
Cantalope	5,750	5,750	6,407	238.9
Honeydew Melon	8,250	8,250	9,553	397.3
Grapefruit	5,000	5,000	5,625	228.8
Grapes	75	75	91	2.9
Lemons	575	575	687	28.7
Oranges	5,000	5,000	5,405	158.9
Peaches	4,500	4,500	4,855	178.8
Pears	5,000	5,000	5,761	171.7
Plums	3,250	3,250	3,900	152.1
Tangerines	4,500	4,500	5,143	156.9
Watermelon	18,750	18,750	20,625	1,143.8

Table 6 Con't

Desserts and Pastries and Ingredients Used Therein	Ingredient Weight (Lbs)	Net Issue Weight (Lbs)	Gross Issue Weight (Lbs)	Gross Volume (ft ³)
<u>Ice Cream</u>				
Ice Cream, Plain or w/Chocolate, Fruit, Nuts, or Bulky Flavors	260	260	286	7.8
<u>Rolls, Frankfurters</u>				
Rolls, Bread, Fresh Finger (Frankfurter)	4,688	4,688	6,094	73.6
<u>Sherbet</u>	262	262	306	10.1

Table 7. Ingredient Weights, Net Issue Weights, Gross Issue Weights and Total Cube Requirements for Ingredients Used on Condiments Prepared in Site From the 42-Day Menu (25,000 Standard Servings)

Condiments and Ingredients Used Therein	Ingredient Weight (Lbs.)	Net Issue Weight (Lbs.)	Gross Issue Weight (Lbs.)	Gross Volume (Ft. ³)
<u>Catsup</u>				
Catsup, Tomato		Variable		
<u>Cranberry Sauce</u>				
Cranberry Sauce, Jellied or Strained	2,738	2,738	3,111	68.4
<u>Mustard</u>				
Mustard, Prepared		Variable		
<u>Olives, Green and Ripe</u>				
Olives, Green, Unpitted	1,333	1,333	3,250	74.1
Olives, Ripe, Unpitted	2,250	2,250	3,750	98.4
<u>Pickles</u>				
Pickles, Cucumber, Dill Sliced		Variable		
Pickles, Cucumber, Sweet Sliced	1,094	1,094	2,275	54.7
Pickles, Mixed, Sweet	2,250	2,250	4,688	117.2
<u>Seafood Cocktail Sauce</u>				
Chili Sauce	2,062	2,062	3,895	126.0
Vinegar, Cider	125	125	200	5.3
Sugar, Granulated	47	47	51	0.6
Worcestershire Sauce	47	47	88	2.0
Salt	8	8	9	0.1
Horseradish, Prepared	250	250	625	17.9
<u>Tartar Sauce</u>				
Dressing, Salad	1,125	1,125	1,773	42.6
Pickle Relish, Sweet	500	500	807	20.2
Parsley, Fresh	7	7	9	0.7
Pimientos, Canned	109	109	127	2.8
Onions, Dry	62	68	69	2.2

Table 7 Con't

Condiments and Ingredients Used Therein	Ingredient Weight (Lbs.)	Net Issue Weight (Lbs.)	Gross Issue Weight (Lbs.)	Gross Volume (Ft. ³)
<u>Tartar Sauce</u>				
Paprika, Ground	0.6	0.6	1	0.1
Pepper, Cayenne	0.2	0.2	0.3	0.1

Table 8. Issue Weight, Total Gross Weight and Total Cube Requirements
For Ambient Storage of Raw Materials for 25,000 Standard
Servings of Products Prepared on Site From the 42-Day Menu

Raw Materials and Products in Which Used	Issue Weight (Lbs.)	Total Gross Weight (Lbs.)	Total Cube (Ft. ³)
<u>Applesauce, Instant</u>			
Fruit, Dried	344	511	12.1
<u>Bananas, Fresh</u>			
Fruit Fresh	4,500	5,625	428.6
Salad, Fruit	1,320	1,650	125.7
<u>Bread, Assorted</u>			
Rye	250	313	26.2
French	2,000	2,500	210.0
Wheat	250	313	26.2
White	2,202	2,752	231.2
<u>Bread Crumbs, Dry</u>			
Scallops, Fried	750	851	42.0
Shrimp, French Fried	750	851	42.0
<u>Bread, Dry, Broken</u>			
Beef Hamburger	500	626	56.0
<u>Buns, Hamburger</u>			
Fishwich	3,125	Est. 3,917	Est. 329.0
Hamburgers	Variable		
<u>Catsup, Tomato</u>			
Condiment Use	Variable		
<u>Cereal, Wheat, Farina</u>			
Farina	1,500	1,678	32.5
<u>Cherries, Canned</u>			
Fruit, Canned	6,875	7,882	193.8

Table 8 Con't

Raw Materials and Products in Which Used	Issue Weight (Lbs)	Total Gross Weight (Lbs)	Total Cube (Ft ³)
<u>Chili Sauce</u>			
Seafood Cocktail Sauce	2,062	3,395	126.0
<u>Coffee Roasted, Ground</u>			
Coffee	750	881	28.4
<u>Corn, Canned, Cream Style</u>			
Corn, Cream Style	6,000	6,900	165.0
Corn, Southern Style	5,000	5,750	137.5
<u>Crackers, Soda, Saltine</u>			
Cracker Crumbs	Variable		
Seafood Platter	430	485	24.1
<u>Cranberry Sauce, Jellied or Strained</u>			
Condiment Use	2,738	3,111	68.4
<u>Dates</u>			
Salad, Fruit	250	281	7.3
<u>Dressing, Salad</u>			
Fishwich	562	886	21.3
Tartar Sauce	1,125	1,773	42.6
<u>Figs, Canned</u>			
Fruit, Canned	6,875	8,461	193.0
<u>Flour, Pastry</u>			
Onion Rings, French Fried	750	758	17.0
Scallops, Fried	1,000	1,010	22.6
Seafood Platter	312	315	7.0
Shrimp, French Fried	1,000	1,010	22.6

Table 8 Con't

Raw Materials and Products in Which Used	Issue Weight (Lbs.)	Total Gross Weight (Lbs.)	Total Cube (Ft. ³)
<u>Grapefruit, Canned</u>			
Salad, Fruit	500	625	15.2
<u>Hominy Grits</u>			
Cereal, Hominy Grits	1,500	1,750	43.7
<u>Horse Radish, Prepared</u>			
Seafood Cocktail Sauce	250	625	17.9
<u>Juice, Pineapple, Canned</u>			
Dressing, Creamy Fruit	500	579	12.9
<u>Marshmallows, Miniature</u>			
Salad, Fruit	250	312	26.2
<u>Milk, Nonfat, Dry</u>			
Corn, Southern Style	102	110	4.4
Fish, French Fried	39	47	1.5
Onion Rings, French Fried	203	246	11.9
Potatoes, Mashed	188	224	10.5
Scallops, Fried	27	30	1.2
Seafood Platter	22	24	0.9
<u>Mix, Pancake</u>			
Pancakes	3,750	4,500	145.0
<u>Monosodium Glutamate</u>			
Beef Hamburger	23	31	1.0
<u>Mushrooms, Canned, Sliced</u>			
Peas With Mushrooms.	1,000	1,205	25.8

Table 8 Con't

Raw Materials and Products in Which Used	Issue Weight (Lbs.)	Total Gross Weight (Lbs.)	Total Cube (Ft. ³)
<u>Mustard, Ground</u>			
Ham Steaks, Baked	12.5	17	0.6
<u>Mustard, Prepared</u>			
Condiment Use	Variable		
<u>Noodles, Egg, Dry</u>			
Noodles, Buttered	3,000	3,250	275.0
<u>Noodles, Chow Mein</u>			
Chow Mein	562	938	68.8
<u>Oats, Rolled</u>			
Cereal, Oatmeal	1,500	1,750	90.0
<u>Olives, Green Unpitted</u>			
Condiment Use	1,333	3,250	74.1
<u>Olives, Ripe, Unpitted</u>			
Condiment Use	2,250	3,750	98.4
<u>Paprika, Ground</u>			
Fish, Baked	15.6	21	0.8
Fishwich	0.6	1	0.1
Scallops, Fried	7.8	10	0.4
Shrimp, French Fried	7.8	10	0.4
Tartar Sauce	0.6	1	0.1

Table 8 Con't

Raw Materials and Products in Which Used	Issue Weight (Lbs.)	Total Gross Weight (Lbs.)	Total Cube (Ft. ³)
<u>Peaches, Canned</u>			
Fruit, Canned	6,875	7,882	184.5
<u>Pears, Canned</u>			
Fruit, Canned	6,875	7,906	189.1
<u>Peas, Black-eyed, Dry</u>			
Peas, Black-eyed	2,000	2,083	46.6
<u>Pepper, Black</u>			
Beef Hamburger	2.5	3	0.2
Beef Roast	7.8	10	0.4
Beef Steak, Grilled	Variable	Variable	
Corn, Southern Style	3.9	5	0.2
Eggs to Order	Variable	Variable	
Fish, French Fried	3.9	5	0.2
Greens, Southern Style	1.9	3	0.1
Ham, Fresh Roast	7.8	10	0.4
Onion Rings, French Fried	2.6	3	0.1
Peas, Black-eyed	3.9	5	0.1
Pork Roast	15.6	21	1.0
Potatoes, Mashed	7.8	10	0.4
Scallops Fried	3.9	5	0.2
Seafood Platter	2.2	3.5	0.2
Shrimp, French Fried	3.9	5	0.2
Turkey Roast	16	21	1.0
Veal Roast	7.8	10	0.4
Veal Steaks, Braised	7.8	10	0.4
<u>Pepper, Cayenne</u>			
Fishwich	0.1	0.2	0.1
Tartar Sauce	0.2	0.3	0.1
<u>Pickles, Cucumber Dill</u>			
Pickles	Variable		

Table 8 Con't

Raw Materials and Products in Which Used	Issue Weight (Lbs.)	Total Gross Weight (Lbs.)	Total Cube (Ft. ³)
<u>Pickles, Cucumber, Sweet, Sliced</u>			
Pickles	1,094	2,275	54.7
<u>Pickles, Mixed , Sweet</u>			
Pickles	2,250	4,688	117.2
<u>Pickle, Relish, Sweet</u>			
Fishwich Tartar Sauce	250 500	403 807	10.1 20.2
<u>Pimientos, Canned</u>			
Fishwich Tartar Sauce	54 109	62 127	1.4 2.8
<u>Pineapple, Canned, Chunks and Tidbits</u>			
Salad Fruit	1,562	1,791	41.9
<u>Plums, Canned</u>			
Fruit, Canned	6,875	7,882	184.5
<u>Potato Chips</u>			
Potato Chips	2,344	3,906	742.2
<u>Potatoes, White, Instant</u>			
Potatoes, Mashed	1,531	1,806	46.2
<u>Prunes,Dried</u>			
Fruit, Dried	875	1,167	53.4
<u>Rice, Parboiled</u>			
Rice, Steamed	2,500	2,550	88.5

Table 8 Con't

Raw Materials and Products in Which Used	Issue Weight (Lbs.)	Total Gross Weight (Lbs.)	Total Cube (Ft. ³)
<u>Rolls, Frankfurter</u>			
Rolls Bread Fresh, Finger (Frankfurter)	4,688	6,094	73.6
<u>Salt</u>			
Beef Hamburger	125	127	2.0
Beef Roast	62.5	63	1.0
Beef Steak, Grilled	Variable		
Cereals			
Farina	47	49	0.8
Hominy Grits	47	49	0.8
Oatmeal	47	49	0.8
Corn, Southern Style	31	32	0.1
Dressing, Creamy Fruit	1	2	0.1
Eggs to Order	Variable	Variable	
Fish, Baked	47	49	0.8
Fish, French Fried	55	56	0.9
Greens, Southern Style	31	32	0.1
Ham, Fresh Roast	125	127	2.0
Noodles, Buttered	78	79	1.3
Onion Rings, French Fried	94	96	1.6
Peas With Carrots, Buttered	43	45	0.7
Peas With Mushrooms	21	22	0.4
Peas, Black-eyed	39	40	0.6
Pork Roast	125	127	2.0
Potatoes, French Fried	31	32	0.5
Potatoes, Mashed	47	48	1.0
Rice, Steamed	63	64	1.0
Scallops, Fried	78	79	1.3
Seafood Cocktail Sauce	8	9	0.1
Seafood Platter	30	32	0.6
Shrimp, French Fried	47	48	0.8
Spinach, Buttered	8	9	0.1
Turkey, Roast	125	127	2.0
Veal Roast	125	127	2.0
Veal Steaks, Braised	78	79	1.3
Vegetables, Mixed	31	32	0.1

Table 8 Con't

Raw Materials and Products in Which Used	Issue Weight (Lbs.)	Total Gross Weight (Lbs.)	Total Cube (Ft. ³)
<u>Salad Oil</u>			
Rice, Steamed	63	71	1.3
<u>Shortening</u>			
Beef Steak, Grilled	Variable		
Eggs-To-Order	Variable		
Potatoes, French Fried	See Footnote 1/Table 1		
Veal Steaks, Braised	250	260	5.0
<u>Starch</u>			
Dressing, Creamy Fruit	78	85	2.0
<u>Sugar, Brown</u>			
Ham Steak, Baked	750	781	13.2
<u>Sugar, Granulated</u>			
Corn, Southern Style	62	63	1.0
Dressing, Creamy Fruit	500	505	11.4
Lemonade	1,750	1,768	39.7
Limeade	1,500	1,516	34.0
Seafood Cocktail Sauce	47	51	0.6
<u>Tea, Black, Loose</u>			
Tea, Hot	125	141	7.2
Tea, Iced	156	176	9.0
<u>Worcestershire Sauce</u>			
Seafood Cocktail Sauce	47	88	2.0
<u>Vinegar</u>			
Ham Steaks, Baked	375	600	15.8
Seafood Cocktail Sauce	125	200	5.3

Table 9. Issue Weight, Total Gross Weight and Total Cube Requirements for Storage of Root Vegetables for 25,000 Standard Servings of Products Prepared on Site from the 42-Day Menu

Raw Materials and Products in Which Used	Issue Weight (Lbs)	Total Gross Weight (Lbs)	Total Cube (ft ³)
<u>Carrots, Fresh</u>			
Peas with Carrots	1,788	1,825	64.8
<u>Onions, Dry</u>			
Beef Hamburger	600	612	19.8
Fishwich	38	40	1.2
Onion Rings, French Fried	6,000	6,120	198.0
Tartar Sauce	68	70	2.2

Table 10. Issue Weight, Total Gross Weight and Total Cube Requirements for Chilled Storage of Raw Materials for 25,000 Standard Servings of Products Prepared On Site From the 42-Day Menu

Raw Materials and Products in Which Used	Issue Weight (Lbs)	Total Gross Weight (Lbs)	Total Cube (ft ³)
<u>Apples, Fresh</u>			
Fruit, Fresh	4,500	4,950	114.0
Salad, Fruit	1,620	1,782	95.0
<u>Bacon</u>			
Greens, Southern Style	500	583	18.9
Peas, Black-eyed	500	583	18.9
<u>Cantalope, Fresh</u>			
Fruit, Fresh	5,750	6,407	238.9
<u>Grapefruit, Fresh</u>			
Fruit, Fresh	5,000	5,625	228.8
<u>Grapes, Fresh</u>			
Salad Fruit	75	91	2.9
<u>Ham, Canned, Whole</u>			
Ham Steaks, Baked	7,500	8,108	187.2
<u>Honeydew Melon, Fresh</u>			
Fruit, Fresh	8,250	9,553	397.3
<u>Lemons, Fresh</u>			
Fruit, Fresh	575	657	20.7
<u>Lettuce, Fresh</u>			
Salad, Fruit	1,260	1,470	102.5
<u>Oranges, Fresh</u>			
Fruit, Fresh	5,000	5,405	158.9
Salad, Fruit	2,223	2,403	70.5

Table 10 Con't

Raw Materials and Products in Which Used	Issue Weight (Lbs)	Total Gross Weight (Lbs)	Total Cube (ft3)
<u>Parsley, Fresh</u>			
Fish, Baked	15.6	20	1.7
Fishwich	2.5	3.5	0.2
Tartar Sauce	7	9	0.7
<u>Peaches, Fresh</u>			
Fruit, Fresh	4,500	4,855	178.8
<u>Pears, Fresh</u>			
Fruit, Fresh	5,000	5,761	171.7
<u>Peppers, Sweet, Fresh</u>			
Corn, Southern Style	534	570	30.8
<u>Plums, Fresh</u>			
Fruit, Fresh	3,250	3,900	152.1
<u>Tangerines, Fresh</u>			
Fruit, Fresh	4,500	5,143	156.9
<u>Watermelons, Fresh</u>			
Fruit, Fresh	18,750	20,625	1,143.8

Table 11. Issue Weight, Total Gross Weight and Total Cube Requirements for Storage of Dairy Products and Eggs for 25,000 Standard Servings of Products Prepared on Site From the 42-Day Menu

Raw Materials and Products in Which Used	Issue Weight (Lbs)	Total Gross Weight (Lbs)	Total Cube (ft ³)
<u>Butter</u>			
Asparagus, Buttered	250	290	4.7
Beans, Green, Buttered	250	290	4.7
Beans, Lima, Buttered	250	290	4.7
Beans, Wax, Buttered	250	290	4.7
Broccoli, Buttered	250	290	4.7
Brussels Sprouts, Buttered	250	290	4.7
Butter, Salted	3,750	5,000	226.9
Cauliflower, Buttered	250	290	4.7
Corn, Southern Style	125	145	2.3
Corn, Whole Grain	250	290	4.7
Fish, Baked	250	290	4.7
Noodles, Buttered	500	581	9.4
Peas with Carrots, Buttered	250	290	4.7
Peas with Mushrooms, Buttered	250	290	4.7
Peas, Buttered	250	290	4.7
Potatoes, Mashed	250	290	4.7
Spinach, Buttered	250	290	4.7
Turkey Roast	250	290	4.7
Vegetables, Mixed	250	290	4.7
<u>Eggs, Shell, Fresh</u>			
Eggs to Order	5,000	6,406	370.2
<u>Milk, Homogenized, Fortified</u>			
Milk	53,750	55,817	878.6

Table 12. Issue Weight, Total Gross Weight and Total Cube Requirements
For Frozen Storage of Raw Materials for 25,000 Standard
Servings of Products Prepared on Site From the 42-Day Menu

Raw Materials and Products in Which Used	Issue Weight (Lbs)	Total Gross Weight (Lbs)	Total Cube (ft ³)
<u>Asparagus, Cuts and Tips</u>			
Asparagus, Buttered	5,000	5,624	220.8
<u>Beans, Green</u>			
Beans, Green, Buttered	5,000	5,624	220.8
<u>Beans, Lima</u>			
Beans, Lima, Buttered	5,000	5,624	220.8
<u>Beans, Wax</u>			
Beans, Wax, Buttered	5,000	5,624	220.8
<u>Beef, Boneless, Oven Roast</u>			
Beef Roast	10,000	10,800	234.0
<u>Beef, Boneless, Grill Steaks</u>			
Beef Steak, Grilled	12,500	13,500	292.5
<u>Beef Boneless Ground</u>			
Beef, Hamburger	7,500	8,100	175.5
<u>Broccoli</u>			
Broccoli, Buttered	5,000	5,624	220.8
<u>Brussels, Sprouts</u>			
Brussels Sprouts, Buttered	5,000	5,624	220.8
<u>Cauliflower</u>			
Cauliflower, Buttered	5,000	5,624	220.8

Table 12 Con't

Raw Materials and Products in Which Used	Issue Weight (Lbs)	Total Gross Weight (Lbs)	Total Cube (ft ³)
<u>Corn, Whole Grain</u>			
Corn, Whole Grain, Buttered	5,000	5,624	220.8
<u>Eggs, Whole, Frozen</u>			
Beef, Hamburger	250	274	5.8
Corn, Southern Style	375	410	8.7
Dressing, Creamy Fruit	375	410	8.7
Fish, French Fried	500	551	11.7
Scallops, Fried	312	343	7.3
Seafood Platter	291	329	6.9
Shrimp, French Fried	500	551	11.7
<u>Fish, Fillet</u>			
Fish, Baked	7,500	8,100	183.0
Fish, French Fried	7,500	8,100	183.0
Seafood Platter	2,025	2,187	49.4
<u>Fish, Portions</u>			
Fishwich	6,250	6,875	35.8
<u>Frankfurters</u>			
Frankfurters, Simmered	6,250	6,708	176.0
<u>Greens, Mustard or Turnip</u>			
Greens, Southern Style	5,000	5,624	220.8
<u>Pork Ham, Boneless</u>			
Ham, Fresh, Roast	10,250	10,865	256.2
<u>Ice Cream, Plain or With Chocolate, Fruit, Nuts or Bulky Flavors</u>			
Ice Cream	260	286	7.8
<u>Ice, Crushed</u>			
Lemonade	3,000	3,000	120.0
Limeade	3,000	3,000	120.0
Tea, Iced	6,250	6,250	250.0

Table 12 Con't

Raw Materials and Products in Which Used	Issue Weight (Lbs)	Total Gross Weight (Lbs)	Total Cube (ft ³)
<u>Juices</u>			
Grape, Concentrated	1,000	1,161	22.5
Grape Fruit, Concentrated	500	581	11.3
Lemon, Concentrated			
Dressing, Creamy Fruit	250	408	8.9
Fish Baked	188	263	5.8
Lemonade	500	581	11.3
Lime, Single Strength			
Limeade	1,992	2,490	61.4
Orange, Concentrated			
Dressing Creamy Fruit	500	581	11.3
Beverage	1,000	1,161	22.5
<u>Peas</u>			
Peas with Carrots, Buttered	3,000	3,375	132.5
Peas with Mushrooms, Buttered	5,000	5,500	177.9
Peas, Buttered	5,000	5,624	220.8
<u>Pork Loin, Boneless</u>			
Pork Roast	9,750	10,335	345.8
<u>Pork Sausage Links</u>			
Pork Sausage, Baked, Links	5,000	5,395	138.6
<u>Potatoes, French Fried</u>			
Potatoes, French Fried	8,750	10,209	341.3
<u>Scallops</u>			
Scallops, Fried	7,500	9,000	216.0
<u>Sherbet</u>			
Sherbet	262	306	10.1
<u>Spinach</u>			
Spinach, Buttered	5,000	5,624	220.8

Table 12 Con't

Raw Materials and Products in Which Used	Issue Weight (Lbs)	Total Gross Weight (Lbs)	Total Cube (ft ³)
<u>Oysters, Shucked</u>			
Seafood Platter	1,250	1,458	37.4
<u>Shrimp, Raw, Peeled, Deveined</u>			
Shrimp, French Fried	5,000	5,800	243.0
<u>Turkey, Ready-to-Cook</u>			
Turkey Roast	16,250	17,663	529.9
<u>Veal, Boneless, Roast</u>			
Veal Roast	10,250	11,070	237.8
<u>Veal, Boneless, Slices</u>			
Veal Steaks, Braised	8,750	9,450	203.0
<u>Vegetables, Mixed</u>			
Vegetables, Mixed, Buttered	5,000	6,000	183.3

Table 13. Alphabetical List of Entree Items from the 42 Day Menu Prepared On Site and Their Serving Distribution

Entree Item	<u>Number of Times Served</u>			Total Times Served
	Singly	In Combination	Short Order	
Beef, Hamburger		2D	42	44
Beef Roast	4S			4
Beef Steak, Grilled	4S			4
Fish, Baked		2D		2
Fish, French Fried		4D		4
Fishwich			8	8
Frankfurters, Simmered		3D	41	44
Ham Steaks, Baked		2D;2S		4
Ham, Fresh Roast		2D		2
Pork Roast		3S		3
Pork Sausage, Baked, Links		12B		12
Scallops, Fried		1S		1
Seafood Platter		2S		2
Shrimp, French Fried		2S		2
Turkey Roast	1S	2S		3
Veal Roast		2S		2
Veal Steaks, Braised		1D;1S		2

B - Breakfast

D - Dinner

S - Supper

Table 14. Alphabetical List of Vegetable Items from the 42 Day Menu Prepared On Site and Their Serving Distribution

<u>Vegetable Item</u>	<u>Singly</u>	<u>In Combination</u>	<u>Short Order</u>	<u>Number of Times Served</u>
				<u>Total Times Served</u>
Asparagus, Buttered		3D;3S		6
Beans, Green, Buttered		6D;4S		10
Beans, Lima, Buttered		3D;4S		7
Beans, Wax, Buttered		4D;2S		6
Broccoli, Buttered		2D;2S		4
Brussels Sprouts, Buttered		2D;4S		6
Cauliflower, Buttered		2D;3S		5
Corn, Cream Style		6D;2S		8
Corn, Southern Style		1S		1
Corn, Whole Grain, Buttered		3D		3
Greens, Southern Style		4D;1S		5
Onion Rings, French Fried		1D;2S		3
Peas with Carrots, Buttered		2D;2S		4
Peas with Mushrooms, Buttered		2S		2
Peas, Blackeyed		1D;4S		5
Peas, Buttered		2D;5S		7
Potato Chips		1D	42	43
Potatoes, French Fried		3D;3S	42	48
Potatoes, Mashed		11D;13S		24
Rice Steamed		7D;1S		8
Spinach, Buttered		3D;3S		6
Vegetables, Mixed, Buttered		6D;4S		10

B - Breakfast

D - Dinner

S - Supper

Table 15. Alphabetical List of Salads and Salad Dressings from the 42 Day Menu Prepared On Site and Their Serving Distribution

Salad or Salad Dressing	<u>Number of Times Served</u>			Total Times Served
	Singly	In Combination	Short Order	
Salad, Fruit		3D; 5S	3	11
Dressing, Creamy Fruit		4D; 7S	3	14

B - Breakfast

D - Dinner

S - Supper

Table 16. Alphabetical List of Beverages from the 42 Day Menu Prepared On Site and Their Serving Distribution

Beverage	Singly	<u>Number of Times Served</u>		
		In Combination	Short Order	Total Times Served
Coffee		42B;42D;42S	42	168
Juices				
Grape		9B		9
Grapefruit		9B		9
Orange		32B		32
Lemonade		6D;2S	6	14
Limeade		3S		3
Milk		42B;42D;42S	42	168
Tea		42B;42D;42S	42	168

B - Breakfast

D - Dinner

S - Supper

Table 17. Alphabetical List of Butter, Cereals and Eggs from the 42 Day Menu
Prepared On Site and Their Serving Distribution

Butter, Cereal, Egg	Singly	<u>Number of Times Served</u>		
		In Combination	Short Order	Total Times Served
Butter		42B; 42D; 42S	36	162
Cereal				
Farina		2B		2
Hominy Grits		4B		4
Oatmeal		7B		7
Eggs to Order		42B		42
Noodles, Buttered		2D; 2S		4
Noodles, Chow Mein		3D; 1S		4
Pancakes		42B		42

B - Breakfast

D - Dinner

S - Supper

Table 18. Alphabetical List of Desserts and Pastries from the 42 Day Menu
Prepared On Site and Their Serving Distribution

Dessert or Pastry	Singly	<u>Number of Times Served</u>		
		In Combination	Short Order	Total Times Served
Bread, Assorted				
French		2D; 5S	7	14
Rye		33D; 22S	1	56
White		42B; 34D; 20S	18	114
Whole Wheat		32D; 20S		52
Buns Hamburger			42	42
Crackers, Soda, Saltine		29D; 3S	29	61
Fruit, Canned				
Cherries, Canned Sweet		2D; 1S	2	5
Figs	1B			1
Peaches		3D; 1S	3	7
Pears		1D; 2S	1	4
Plums		2S		2
Fruit, Dried				
Applesauce, Instant			4S	4
Prunes	2B			2
Fruit, Fresh				
Apples		5B		5
Bananas		6B		6
Cantalope		5B		5
Honeydew Melon		5B		5
Grapefruit		4B		4
Lemons		42D; 42S	42	126
Oranges	5B			5
Peaches		3S	3	6
Pears		3S		3
Plums		2B; 1D; 1S		4
Tangerines		4B		4
Watermelon		1D; 2S	1	4
Ice Cream		17D; 13S	16	46
Rolls Frankfurter			42	42
Sherbert		1D; 3S	1	5
B - Breakfast				
D - Dinner				
S - Supper				

Table 19. Alphabetical List of Condiments from the 42 Day Menu Prepared On Site and Their Serving Distribution

Condiment	<u>Number of Times Served</u>			
	Singly	In Combination	Short Order	Total Times Served
Catsup Tomato	Variable			
Cranberry Sauce		2D;5S		7
Mustard, Prepared	Variable			
Olives, Green, Unpitted	Variable			
Olives, Ripe, Unpitted	Variable			
Pickles, Cucumber, Dill Sliced	Variable			
Pickles, Cucumber, Sweet Sliced	Variable			
Pickles, Mixed, Sweet	Variable			
Seafood Cocktail Sauce		1D;3S		4
Tarter Sauce		1D;3S		4

B - Breakfast

D - Dinner

S - Supper

Table 20. Summary of Issue Weights, Total Gross Weights and Total Cube Requirements for Ambient Storage of Raw Materials Used in Products Prepared Onsite During A 42-Day Menu Cycle*

Ingredient	Issue Weight (lbs)	Total Gross Weight (lbs)	Total Cube (ft ³)
Applesauce, Instant	688	1,022	24.2
Bananas, Fresh	34,260	42,825	3,263.0
Bread, Assorted	153,014	191,226	16,063.2
Bread Crumbs, Dry	1,125	1,276	63.0
Bread, Dry Broken	11,000	13,772	1,232.0
Buns, Hamburger	65,625	Est 82,257	Est 6,909.0
Catsup, Tomato	Variable		
Cereal, Wheat, Farina	1,500	1,678	32.5
Cherries, Canned, Sweet	17,187	19,705	484.5
Chili Sauce	4,124	7,790	252.0
Coffee Roasted, Ground	63,000	74,004	2,385.6
Corn, Canned, Cream Style	26,500	30,475	728.8
Crackers, Soda, Saltine	Variable		
Cracker Crumbs	430	485	24.1
Cranberry Sauce, Canned	9,583	10,888	239.4
Dates	1,375	1,546	40.1
Dressing, Salad	4,498	7,090	170.4
Figs, Canned	6,875	8,461	193.0
Flour Pastry	2,937	2,967	66.4
Grapefruit, Canned	2,750	3,437	83.6

Table 20 Con't

Ingredient	Issue Weight (lbs)	Total Gross Weight (lbs)	Total Cube (ft ³)
Hominy Grits	3,000	3,500	87.4
Horseradish, Prepared	500	1,250	35.8
Juice, Pineapple, Canned	2,750	3,184	71.0
Marshmallows, Miniature	1,375	1,716	144.1
Milk, Nonfat, Dry	2,725	3,236	150.2
Mix, Pancake	78,750	94,500	3,045.0
Monosodium Glutamate	506	682	22.0
Mushrooms, Canned, Sliced	1,000	1,205	25.8
Mustard, Ground	25	34	1.6
Mustard Prepared	Variable		
Noodles, Egg, Dry	6,000	6,500	550.0
Noodles, Chow Mein	1,124	1,876	137.6
Oats Rolled	5,250	6,125	315.0
Olives, Green, Unpitted	Variable		
Olives, Ripe, Unpitted	Variable		
Paprika, Ground	31	42	2.0
Peaches, Canned	24,062	27,587	645.8
Pears, Canned	13,750	15,812	378.2
Peas, Blackeye, Dry	5,000	5,207	116.5
Pepper, Black	295	378	17.2
Pepper, Cayenne	0.8	1.4	0.6

Table 20 Con't

Ingredient	Issue Weight (lbs)	Total Gross Weight (lbs)	Total Cube (ft ³)
Pickles, Cucumber, Dill	Variable		
Pickles, Cucumber, Sweet Sliced	Variable		
Pickles, Mixed, Sweet	Variable		
Pickle, Relish, Sweet	2,000	3,631	80.8
Pimentos, Canned	434	502	11.2
Pineapple, Canned, Chunks and Tidbits	8,591	9,850	230.4
Plums, Canned	6,875	7,882	184.5
Potato Chips	50,396	83,979	15,957.3
Potatoes White, Instant	18,372	21,672	554.4
Prunes, Dried	1,750	2,334	106.8
Rice, Par Boiled	10,000	10,200	354.0
Rolls, Frankfurter	98,448	127,344	1,545.6
Salad Oil	252	284	5.2
Salt	6,575	6,719	106.3
Shortening	250	260	5.0
Starch	429	468	11.0
Sugar, Brown	1,500	1,562	26.4
Sugar, Granulated	17,375	17,561	164.4
Tea, Black, Loose or Bags	23,604	26,628	1,360.8

Table 20 Con't

Ingredient	Issue Weight (lbs)	Total Gross Weight (lbs)	Total Cube (ft ³)
Vinegar, Cider	1,000	1,600	42.2
Worcestershire Sauce	94	176	4.0

*Figures are adjusted for number of times served and whether or not served in combination with another item (equal consumption assumed).

Table 21. Summary of Issue Weights, Total Gross Weights and Total Cube For Storage of Root Vegetables Used In Products Prepared Onsite During a 42-Day Menu Cycle*

<u>Ingredient</u>	Issue Weight (Lbs.)	Total Gross Weight (Lbs.)	Total Cube (Ft.3)
Carrots, Fresh	3,576	3,650	129.6
Onions, Dry	22,488	22,944	741.8

*Figures are adjusted for number of times served and whether or not served in combination with another item (equal consumption assumed).

Table 22. Summary of Issue Weights, Total Gross Weights and Total Cube Requirements for Chilled Storage of Raw Materials
 *Figures are adjusted for number of times served and whether or not served in combination with another item (equal consumption assumed).

Ingredient	Issue Weight (Lbs.)	Total Gross Weight (Lbs.)	Total Cube (Ft. ³)
Apples, Fresh	31,410	34,551	1092.5
Bacon	2,500	2,915	94.5
Cantalope, Fresh	28,750	32,035	1194.5
Grapefruit, Fresh	25,000	28,125	1144.0
Grapes, Fresh	412	500	14.5
Ham, Canned, Whole	15,000	16,216	374.4
Honeydew, Ron, Fresh	41,250	47,765	1986.5
Lemons, Fresh	36,225	41,391	1304.1
Lettuce, Fresh	6,930	8,085	563.8
Oranges, Fresh	37,226	40,241	1182.2
Parsley, Fresh	39.6	52	3.9
Peaches, Fresh	13,500	14,565	536.4
Pears, Fresh	7,500	8,641	257.6
Peppers, Sweet, Fresh	267	285	15.4
Plums, Fresh	9,750	11,700	456.3
Tangerines, Fresh	18,000	20,572	627.6
Watermelon, Fresh	37,500	41,250	2287.6

*Figures are adjusted for number of times served and whether or not served in combination with another item (equal consumption assumed).

Table 23. Summary of Issue Weights, Total Gross Weights and Total Cube Requirements for Storage of Dairy Products and Eggs Used in Products Prepared Onsite During A 42-Day Menu Cycle*

Ingredient	Issue Weight Weight (Lbs.)	Total Gross Weight (Lbs.)	Total Cube ³ (Ft.)
Butter	621,812	826,604	37,015.1
Eggs, Shell, Fresh	105,000	134,526	7,350.4
Milk, Homogenized Fortified	4,515,000	4,688,628	87,964.8

*Figures are adjusted for number of times served and whether or not served in combination with another item (equal consumption assumed).

Table 24. Summary of Issue Weights, Total Gross Weights and Total Cube Requirements for Frozen Storage of Raw Materials Used in Products Prepared Onsite During A 42-Day Menu Cycle*

Ingredients	Issue Weight (Lbs)	Total Gross Weight (Lbs)	Total Cube (ft ³)
Asparagus, cuts and tips	15,000	16,872	662.4
Beans, Green	25,000	28,120	1,104.0
Beans, Lima	17,500	19,684	772.8
Beans, Wax	15,000	16,872	662.4
Beef, Boneless, Oven Roast	40,000	43,200	936.0
Beef, Boneless, Grill Steaks	50,000	54,000	1,170.0
Beef, Boneless, Ground	165,000	178,200	3,861.0
Broccoli	10,000	11,250	441.6
Brussels Sprouts	15,000	16,872	662.4
Cauliflower	12,500	14,060	552.0
Corn, Whole Grain	7,500	8,436	331.2
Eggs, Whole, Frozen	9,697	10,970	225.4
Fish, Fillet	24,525	26,487	598.4
Fish Portions	25,000	27,500	155.2
Frankfurters	137,500	147,576	3,872
Greens, Mustard or Turnip	12,500	14,060	552.0
Ham, Pork, Boneless	10,250	10,865	256.2
Ice Cream	5,333	5,863	159.9
Ice, Crushed	550,500	550,500	22,020.0
Juice, Grape, Concentrated	4,500	5,224	101.2
Juice, Grapefruit Concentrated	2,250	2,614	50.8
Juice, Lemon, Concentrated	5,063	6,574	133.8
Juice, Lime, Single Strength	2,988	3,735	92.1
Juice, Orange Concentrated	18,750	21,772	422.1
Oysters, Shucked	1,250	1,458	37.4
Peas	28,500	31,934	1,480.7
Pork Loin, Boneless	14,625	15,502	518.7
Pork Sausage Links	30,000	32,370	831.6
Potatoes, French Fried	210,000	245,016	8,191.2
Scallops	3,750	4,500	108.0
Sherbet	655	765	25.2
Spinach	15,000	16,872	662.4
Shrimp, Raw, Peeled, Deveined	5,000	5,800	243.0
Turkey, Ready-To-Cook	32,500	35,326	1,059.8
Veal, Boneless Roast	10,250	11,070	237.8
Veal, Boneless, Slices	8,750	9,450	203.0
Vegetables, Mixed	25,000	30,000	916.5

*Figures are adjusted for number of times served and whether or not served in combination with another item (equal consumption assumed).

Table 25. Total Ambient Storage Requirements for Ingredients Used
in the Preparation of Products During A 42-Day Menu Cycle

Ingredient	Issue Weight (Lbs)	Gross Issue Weight (Lbs)	Total Cube (ft ³)
Antioxidant Compound	1,892	3,354	68.8
Applesauce, Canned	3,376	3,873	90.7
Applesauce, Instant	688	1,022	24.2
Apples, Canned	20,752	24,208	634.0
Apricots, Canned	12,236	14,024	283.0
Baking Powder	622	787	20.4
Baking Soda	153	177	5.0
Bananas, Fresh	43,596	54,499	4,155.5
Bay Leaves	22	28	2.0
Beans, Green, Canned	2,637	2,741	68.6
Beans, Kidney, Canned	8,093	9,278	217.2
Beans, Kidney, Dry	8,000	8,160	235.4
Bean Sprouts, Canned	6,125	14,507	94.0
Beans, Wax, Canned	2,367	2,741	68.6
Beets, Canned	3,875	4,568	111.6
Blueberries, Canned	7,000	8,107	202.7
Bread, Assorted	302,781	418,515	35,152.6
Bread, Dry, Broken	11,000	13,772	1,232.0
Bread Crumbs, Dry	10,445	11,853	587.1
Buns, Hamburger 1/	65,625	Est. 82,257	Est. 6,909.0
Cabbage, Dehydrated	3,000	6,000	550.0
Caramel Color	35	45	1.8
Catsup, Tomato 2/	34,288	39,018	877.4
Celery Salt	47	58	2.2
Cereal, Wheat Farina	1,500	1,678	32.5
Cheese, Grated	2,000	2,495	114.4
Cheese, Process, American	85,917	94,848	1,661.5
Cherries, Canned, RSP	29,947	28,778	703.7
Cherries, Canned, Sweet	17,187	19,705	484.5
Chili Powder	130	201	6.2
Chili Sauce	7,140	13,500	424.2
Chocolate Chips	1,126	1,250	31.2
Cinnamon, Ground	134	189	5.7
Creams, Canned	1,500	1,957	55.3
Cloves, Ground	6.9	9	0.6
Cloves, Whole	8	11	0.7
Cocoa	1,080	1,484	60.1

Table 25 Con't

Ingredient	Issue Weight (Lbs)	Gross Issue Weight (Lbs)	Total Cube (ft ³)
Coconut, Sweetened	563	675	36.0
Coffee, Roasted, Ground	63,000	74,004	2,385.6
Corn, Canned	9,470	17,132	401.0
Corn Canned, Cream Style	26,500	30,475	728.8
Corned Beef, Canned	6,000	7,348	125.0
Crackers, Soda, Saltine	Variable		
Cracker Crumbs	430	485	24.1
Cranberry Sauce, Canned	9,583	10,888	239.4
Dates	1,375	1,546	40.1
Dessert Powder, Gelatin	18,739	23,444	598.2
Dressing, Salad, French	750	1,156	24.2
Dressing, Salad	29,232	45,842	1,095.9
Figs, Canned	6,875	8,461	193.0
Flour, Cake	4,718	4,798	105.5
Flour, Pastry	68,340	69,207	1,571
Garlic, Dehydrated	31	43	2.5
Garlic Powder	17	23	1.2
Garlic Salt	2.5	3	0.1
Ginger, Ground	5.7	7.5	0.3
Grapefruit, Canned	2,750	3,437	83.6
Hamburger, Canned without Gravy	3,516	5,287	134.5
Hominy Grits	3,000	3,500	87.4
Honey	351	497	8.3
Horseradish, Prepared	500	1,250	35.8
Hot Sauce	24	50	1.5
Juice Pineapple, Canned	2,750	3,184	71.0
Juice, Tomato, Canned	1,532	1,780	41.5
Kitchen Bouquet	303	572	14.3
Lemon Flavoring	12	20	0.6
Lemon Rind	171	196	6.3
Macaroni, Dry	1,020	1,160	35.5
Mace, Ground	2.6	3.5	0.2
Marshmallows, Miniature	1,875	2,342	196.7
Milk, Nonfat, Dry	17,042	20,038	927.5
Mix, Bread and Roll	22,500	24,750	645.0
Mix, Biscuit, Baking Powder	8,000	8,800	229.2
Mix, Brownie, Chocolate	3,750	4,200	69.0
Mix, Cake, Devils Food	6,875	6,938	133.5
Mix, Cake, Yellow	19,443	19,757	377.3
Mix, Cake, Spice	1,250	1,500	45.8
Mix, Cake, White	5,000	5,100	97.0
Mix, Corn Bread	4,800	5,860	195.2
Mix, Doughnut	5,625	6,875	229.4

Table 25 Con't

Ingredient	Issue Weight (Lbs)	Gross Issue Weight (Lbs)	Total Cube (ft ³)
Mix, Gingerbread	2,500	2,550	48.5
Mix, Pancake	78,750	94,500	3,045.0
Mix, Sweet Dough	15,000	18,000	550.0
Molasses	1,500	1,788	37.4
Monosodium Glutamate	770	1,032	34.3
Mushrooms, Canned, Sliced	1,500	1,806	38.6
Mustard, Ground	220	296	11.3
Mustard, Prepared	1,760	2,537	70.0
Noodles, Dry, Lasagna	2,250	2,813	157.5
Noodles, Chow Mein	1,124	1,876	137.6
Noodles, Egg, Dry	6,875	7,550	626.5
Nutmeg, Ground	57	78	5.0
Nuts, Ground or Chopped	2,188	2,720	111.6
Oats, Rolled	7,438	8,675	445.9
Olives, Green, Unpitted	Variable		
Olives, Ripe, Unpitted	Variable		
Onions, Dehydrated	125	209	9.2
Onion Powder	77	98	9.8
Onion Salt	54	72	1.8
Oregano, Ground	72	92	4.4
Paprika, Ground	316	424	16.8
Parsley, Dehydrated	8	12	2.3
Peaches, Canned	43,469	49,832	1,166.4
Peanut Butter	1,892	2,269	69.4
Pears, Canned	22,188	25,517	610.2
Peas, Blackeye, Dry	5,000	5,207	116.5
Pepper, Black	774	1,001	42.4
Pepper, Cayenne	37	52	4.7
Pepper, White	2	3	0.1
Pickles, Cucumber, Dill	Variable		
Pickles, Cucumber, Sweet, Sliced	812	1,662	44.4
Pickles, Mixed, Sweet	Variable		
Pickle Relish, Sweet	4,186	7,296	166.8
Pimientos, Canned	2,305	2,695	60.3
Pineapple, Canned	26,355	30,184	706.7
Plums, Canned	6,875	7,882	184.5
Potato Chips	50,396	83,979	15,957.3
Potatoes, Sweet, Canned	2,813	5,004	11.3
Potatoes White, Instant	19,138	22,575	577.5
Poultry, Seasoning	41	56	2.0
Prunes, Dried	1,750	2,334	106.8
Raisins	2,969	3,162	65.4
Rice	12,000	12,240	425.0

Table 25 Con't

Ingredient	Issue Weight (Lbs)	Gross Issue Weight (Lbs)	Total Cube (ft ³)
Rolls, Frankfurter	98,448	127,344	1,545.6
Salad Oil	23,897	27,493	534.2
Salmon, Canned	5,000	6,044	152.0
Salt	17,249	17,695	291.2
Shortening	60,333	62,781	1,211.3
Soy Sauce	1,125	1,803	48.5
Soups	2,813	3,584	126.0
Soup and Gravy Base	2,755	3,394	90.9
Spaghetti, Dry	9,000	10,875	247.5
Starch	4,961	5,335	134.0
Starch, Pregelatinized	1,906	1,941	37.2
Sugar, Brown	19,589	20,187	343.8
Sugar, Granulated	75,692	76,705	1,520.9
Sugar, Powdered	9,441	9,827	177.6
Syrup, Blended	344	396	7.4
Tea, Black, Loose or Bags	23,604	26,628	1,360.8
Thyme, Ground	31	39	2.6
Tomatoes, Canned	62,765	72,748	1,819.5
Tomato Paste	15,507	17,819	383.0
Topping, Dehydrated	750	1,029	43.8
Tuna, Canned	10,016	11,254	72.5
Vinegar, Cider	18,128	31,277	823.5
Vanilla	717	1,122	26.4
Worcestershire Sauce	1,780	3,412	84.1
Grand Totals	1,867,312	2,263,187	103,176.9

Table 26. Total Storage Requirements For Root Vegetables Used in the Preparation of Products During A 42-Day Menu Cycle
 16 Dec 1968

Root Vegetable	Issue Weight (Lbs.)	Total Gross Weight (Lbs.)	Total Cube (Ft. ³)
Carrots, Fresh	44,138	45,051	1,600.8
Garlic, Dry	187	203	10.0
Onions, Dry	70,297	71,711	2,328.8
Potatoes, White Fresh	258,836	280,407	7,606.4
Grand Totals	373,458	397,372	11,846.0

Table 27. Total Chilled Storage Requirements for Ingredients Used In
the Preparation of Products During A 42-Day Menu Cycle

Ingredient	Issue Weight (Lbs.)	Total Gross Weight (Lbs.)	Total Cube (Ft. ³)
Apples, Fresh	35,568	39,305	1,140.9
Bacon	25,000	27,011	3,807.1
Cabbage, Fresh	42,081	47,676	2,000.8
Cantalope, Fresh	28,750	32,035	1,194.5
Celery, Fresh	48,200	52,550	1,988.5
Cold Meat (Luncheon)	18,375	19,687	469.0
Corn, Fresh	108,788	119,691	4,606.2
Cucumbers, Fresh	21,194	23,313	682.1
Endive, Fresh	4,655	5,817	374.5
Escarole, Fresh	4,655	5,817	374.5
Grapefruit, Fresh	25,000	28,125	1,144.0
Grapes, Fresh	412	500	14.5
Ham, Canned, Whole	82,706	89,475	2,071.9
Lemons, Fresh	38,835	44,393	1,400.4
Lettuce, Fresh	163,468	186,463	10,418.7
Meat, Diced, Cooked	1,000	1,080	23.4
Onions, Green, Fresh	12,825	17,100	1,043.1
Oranges, Fresh	37,398	40,437	1,188.1
Parsley Fresh	465	590	51.6
Peaches, Fresh	13,500	14,565	536.4
Pears, Fresh	7,500	8,641	257.6
Peppers, Sweet, Fresh	25,205	26,662	1,454.1
Plums, Fresh	9,750	11,700	456.3
Romaine, Fresh	9,310	11,641	749.7
Sausage, Pork	375	410	12.0
Squash, Summer, Fresh	2,625	3,288	117.1
Tangerines, Fresh	18,000	20,572	627.6
Tomatoes, Fresh	13,063	14,374	920.6
Watermelons, Fresh	37,500	41,250	2,287.6
Grand Totals	791,140	934,168	41,412.8

Table 28. Total Storage Requirements for Dairy Products and Eggs Used in the Preparation of Products During A 42-Day Menu Cycle

Ingredient	Issue Weight (Lbs.)	Total Gross Weight (Lbs.)	Total Cube (Ft. ³)
Butter	642,332	849,928	37,492.7
Cheese, Cheddar	9,906	10,660	227.9
Cheese, Cottage	19,710	29,565	1,202.2
Cheese, Mozzarella	1,242	1,397	25.5
Eggs, Shell, Fresh	112,545	143,116	8,314.5
Milk, Homogenized, Fortified	4,515,000	4,688,628	87,964.8
Grand Totals	5,300,735	5,580,178	126,913.1

Table 29. Total Frozen Storage Requirements for Ingredients Used in the Preparation of Menus During a 10-Day Menu Cycle

Ingredient	Issue Weight (Lbs)	Total Gross Weight (Lbs)	Total Cube (ft ³)
Asparagus, cuts and tips	15,000	16,872	662.4
Beans, Green	25,000	28,120	1,104.0
Beans, Lima	17,500	19,684	772.8
Beans, Wax	15,000	16,872	662.4
Beef, Boneless Diced	30,000	32,400	704.0
Beef, Boneless, Grill Steaks	50,000	54,000	1,170.0
Beef, Boneless, Ground	288,891	311,808	6,762.0
Beef, Boneless, Oven Roast	40,000	43,200	936.0
Beef, Boneless, Pot Roast	30,000	32,400	702.0
Beef, Boneless, Swiss Steak	20,000	21,600	468.0
Beef, Corned Roast	11,000	12,754	208.0
Boysenberries, Frozen	3,125	3,282	.87.5
Broccoli	15,000	16,893	663.1
Brussels Sprouts	15,000	16,872	662.4
Cauliflower	12,500	14,060	552.0
Cervelat, Soft, Frozen	5,250	5,556	105.0
Chicken, cut up	88,101	95,408	2,712.5
Chicken, Whole	5,625	6,240	193.5
Corn, Whole Grain	7,500	8,436	331.2
Eggs, Whole Frozen	159,704	174,612	4,068.3
Fish, Fillet	24,525	26,487	598.4
Fish, Portions	25,000	27,500	155.2
Frankfurters	140,625	150,930	475.2
Fruit, Frozen	10,000	11,282	261.2
Giblets Frozen	500	554	8.0
Greens, Mustard or Turnip	12,500	14,060	552.0
Ham, Pork, Boneless	10,250	10,865	256.2
Ice Cream	5,333	5,863	159.9
Ice, Crushed	550,500	550,500	22,020.0
Juice, Grape, Concentrated	4,500	5,224	101.2
Juice, Grapefruit, Concentrated	2,250	2,614	50.8
Juice, Lemon, Concentrated	6,032	7,989	188.6
Juice, Lime, Single Strength	2,988	3,735	92.1
Oysters, Shucked	1,250	1,458	37.4
Peas	30,773	34,484	1,581.2
Pork, Boneless, Diced	16,000	16,960	400.0
Pork Loin, Boneless	42,375	44,917	1,310.
Pork Sausage Links	30,000	32,370	831.6
Pork Spareribs	37,500	40,690	1,158.0
Potatoes, French Fried	210,000	245,016	8,191.2

Table 29 Con't

Ingredient	Issue Weight (Lbs)	Total Gross Weight (Lbs)	Total Cube (ft ³)
Salami, Frozen, Cooked	3,750	4,056	105.0
Scallops	3,750	4,500	108.0
Sherbet	655	765	25.2
Shrimp, Raw, Peeled, Deveined	5,000	5,800	243.0
Spinach	15,000	16,872	662.4
Strawberries, Frozen	1,500	1,694	39.3
Turkey, Frozen, Cooked, Boneless	15,000	17,136	399.0
Turkey, Raw, Boneless Frozen	20,250	30,008	507.5
Turkey, Ready-To-Cook	32,500	35,326	1,059.8
Veal, Boneless, Roast	10,250	11,070	237.8
Veal, Boneless, Slices	30,625	33,075	913.5
Veal, Ground	8,875	9,585	206.0
Vegetables, Mixed	25,000	30,000	916.5
Grand Totals	2,189,212	2,364,454	67,378.3

Table 30. Summary of Weights of Meat Required for Use
in Products Selected from the 42-Day Menu 1/

Raw Materials and Products in Which Used	Ingredient Weight Per 100 Men (lb)	Adjusted Serving Weight Per Man 2/ (lb)	Amount Required For Each Time Served 3/ (lb)	Amount Required in 42-Days 4/ (lb)
<u>Beef, Boneless, Diced</u>				
Beef Cubes, Barbecued	30	0.15	3,750	7,500
Beef Pot Pie	30	0.15	3,750	3,750
Beef Stew	30	0.15	3,750	18,750
Total				30,000
Beef, Boneless Grill Steaks	50	0.50	12,500	50,000
<u>Beef, Boneless, Ground</u>				
Beef, Barbecued	30	0.15	3,750	26,250
Beef, Creamed, Ground	24	0.12	3,000	18,000
Beef Steak, Salisbury	30	0.15	3,750	11,250
Chili Con Carne	24	0.12	3,000	6,000
Hash, Beef	14	0.07	1,750	1,750
Lasagna	8	0.04	1,000	3,000
Meat Ball Submarine	30	0.15	3,750	7,500
Meat Balls, Swedish	30	0.15	3,750	11,250
Meat Loaf	30	0.15	3,750	7,500
Spaghetti and Meat Balls	30	0.15	3,750	11,250
Spaghetti with Meat Sauce	24	0.12	3,000	9,000
Veal Loaf	10	0.05	1,250	2,500
Total				115,250
Beef, Boneless, Oven Roast	40	0.4	10,000	40,000
<u>Beef, Boneless, Pot Roast</u>				
Beef Pot Roast	40	0.2	5,000	20,000
Sandwich Hot Roast Beef	40	0.2	5,000	10,000
Total				30,000
<u>Beef, Boneless, Swiss Steak</u>				
Beef Steak, Pepper	40	0.2	5,000	5,000
Beef Steak, Swiss	40	0.2	5,000	15,000
Total				20,000

<u>Raw Materials and Products in Which Used</u>	<u>Ingredient Weight Per 100 Men (lb)</u>	<u>Adjusted Serving Weight Per Man <u>2/</u> (lb)</u>	<u>Amount Required For Each Time Served <u>3/</u> (lb)</u>	<u>Amount Required in 42-Days <u>4/</u> (lb)</u>
<u>Beef, Corned, Roast</u>				
Beef Corned	45	0.28	7,000	7,000
Hash, Corned Beef	24	0.12	3,000	6,000
Sandwich, Corned Beef	16	0.08	2,000	6,000
Total				19,000
<u>Cervelat, Frozen</u>				
Cold Meat Platter	7	0.035	875	5,250
<u>Chicken, Cut Up</u>				
Chicken Barbecued	50	0.25	6,250	12,500
Chicken Country Style	50	0.50	12,500	12,500
		0.25	6,250	6,250
Chicken, Oven Fried	50	0.50	12,500	37,500
Total				87,500
<u>Chicken Whole Raw</u>				
Chicken Pot Pie	45	0.28	7,000	7,000
<u>Fish, Fillet or Portion</u>				
Fish Baked	30	0.15	3,750	7,500
Fish French Fried	25	0.125	3,125	12,500
Fishwich	25	0.125	3,125	25,000
Seafood Platter	8	0.04	1,000	2,000
Total				47,000
<u>Frankfurters, Frozen</u>				
Frankfurters, Barbecued	25	0.125	3,125	3,125
Frankfurters, Simmered	25	0.125	3,125	128,125
Total				131,250
<u>Giblets, Frozen</u>				
Gravy Gilet	2	0.01	250	500

Raw Materials and Products in Which Used	Ingredient Weight Per 100 Men (lb)	Adjusted Serving Weight Per Man 2/ (lb)	Amount Required For Each Time Served 3/ (lb)	Amount Required in 42-Days 4/ (lb)
<u>Oysters, Frozen, Shucked</u>				
Seafood Platter	5	0.25	625	1,250
<u>Pork Boneless Diced</u>				
Chop Suey, Pork	32	0.16	4,000	12,000
Sweet and Sour Pork	32	0.16	4,000	4,000
Total				16,000
<u>Pork, Ham, Boneless</u>				
Ham, Fresh Roast	41	0.28	5,000	10,000
<u>Pork Loin, Boneless</u>				
Pork Loin, Barbecued	39	0.195	4,875	4,875
Pork Slices Braised	35	0.175	4,375	13,125
Sandwich, Hot Pork	39	0.195	4,875	9,750
Pork Roast	39	0.195	4,875	14,625
Total				42,350
<u>Pork Slices, Boneless</u>				
Pork, Baked Stuffed	35	0.175	4,375	4,375
<u>Pork Spare Ribs</u>				
Pork Spare Ribs, Barbecued	75	0.375	9,375	28,125
Pork Spare Ribs, Braised	75	0.375	9,375	9,375
Total				37,500
Pork Sausage Links	20	0.1	2,500	30,000
<u>Salami, Frozen, Cooked</u>				
Cold Meat Platter	5	0.03	750	4,500
Scallops, Fried	30	0.15	3,750	3,750

Raw Materials and Products in Which Used	Ingredient Weight Per 100 Men (lb)	Adjusted Serving Weight Per Man <u>2/</u> (lb)	Amount Required For Each Time Served <u>3/</u> (lb)	Amount Required in 42-Days <u>4/</u> (lb)
Shrimp, French Fried	20	0.1	2,500	5,000
<u>Turkey, Frozen, Boneless, Cooked</u>				
Cold Meat Platter	20	0.1	2,500	15,000
<u>Turkey Frozen Boneless, Raw</u>				
Salad, Turkey	26	0.13	3,250	6,500
Sandwich, Hot Turkey	40	0.2	5,000	20,000
Turkey Pot Pie	26	0.13	3,250	6,500
Total				33,000
<u>Turkey, Whole, Ready-To-Cook</u>	65	0.65	16,250	16,250
		0.325	8,125	16,250
Total				32,500
<u>Veal, Boneless, Slices</u>				
Veal Parmesan	35	0.175	4,375	8,750
Veal Steaks Braised	35	0.175	4,375	13,125
Veal Steaks Breaded	35	0.175	4,375	8,750
Total				30,625
<u>Veal, Boneless, Roast</u>	41	0.2	5,000	10,000
<u>Veal Ground</u>				
Veal Burgers	31	0.155	3,875	3,875
Veal Loaf	20	0.1	2,500	5,000
Total				8,875

1/ Meat stored in frozen state only

2/ Adjusted according to whether or not served in combination with another entree

3/ 25,000 Standard Servings

4/ Adjusted to number of times served.

